

REMARKS

Amendments to the Specification

Amendments to several paragraphs on pages 1 are presented hereinabove to include the CIP application serial number. Since this number was not known at the time of filing, it was not included in the Declaration.

Amendments to several paragraphs on pages 30-35 are presented hereinabove. The amendments generally concern correction of typographical errors that are apparent from the context of the description and by comparing the text with the drawings.

Amendments to the Claims

Claims 1, 4-6, 8-10 and 13-21 are now pending in the referenced application.

Changes in response to the Examiner's Detailed Action are described in remarks hereinbelow.

Claim Rejections - 35 USC 102(b) and 103(a)

7. Claims 1 and 2 have been rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as being obvious over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484).
8. Claims 1-7 have been rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as being obvious over Adachi (US 5,273,599) or Felten (US 3,816,218).
9. Claims 4-7 have been rejected under 35 USC 103(a) as being unpatentable over Adachi (US 5,273,599) or Felten (US 3,816,218) as applied above, and further in view of Mori (US 5,269,870).

Applicant respectfully submits that the disclosed 3-position bead lock assembly is novel, particularly with respect to the use of a semi-expanded condition having a pre-determined second finger radius. Although the presented prior art bead lock assemblies may be capable of stopping at a semi-expanded condition, the means for doing so in a repeatable manner at a pre-determined second finger radius are not obvious. In order to distinctly claim those non-obvious features of the present invention that cause it to achieve the semi-expanded condition as desired, the independent claim 1 has been amended to combine the original claims 1, 2, 3, and 7.

Other than obvious grammar and punctuation formal changes, a few clarifying changes have been made to the text that has been combined into the amended claim 1. The transitional word "wherein" has been appropriately added at the end of the claim preamble. The grammar of the first

clause has been improved by inserting "such that" and replacing "being" with "is". To distinguish from the "links" of Felten, limiting words have been added to the phrase "...elongate links extending between, and pivotably connected at respective ends to, the carrier ring..." (supported by Figure 9A, for example). The term "the finger elements" has no antecedent, and has been replaced by the proper term "the finger segments". When incorporating the sense of claim 7 into the amended claim 1, the wording has been changed to fit the context, thereby modifying the original claim 3 text as follows: "a first piston disposed in the piston portion; a second piston disposed in the piston portion axially between the first piston and the carrier ring". It can be seen from Figures 7-10A that this is consistent with the claim 7 text claiming that "the first piston is disposed axially outward of the second piston".

The final clause of the amended claim 1 (supported by the description on page 34, lines 11-29, for example) has been added to clarify one of the important features of the present invention that distinguish it in a novel and non-obvious way from the prior art, i.e., "axial movement of the first piston indirectly causes axial movement of the carrier ring only by axially pushing the second piston."

It should be noted that although the prior art exemplified by Adachi and Felten teach the use of two interacting pistons, those two pistons are NOT acting on the SAME expanding elements, whereas the present invention has pistons P1 and P2 that both act upon the same carrier ring CR. The addition of the final clause to claim 1 should clearly *claim* this *disclosed* difference vs. the prior art.

Applicant believes that the currently amended independent claim 1 overcomes Examiner's objections. Therefore the claims that depend from claim 1 should also be allowable as further limitations on an allowed claim. Nevertheless, several of these claims have been amended as follows.

Claims 2, 3, and 7 are canceled since they are now incorporated in the amended claim 1.

Claim 4 is necessarily changed to depend from claim 1 instead of claim 3.

Claim 5 is amended to more distinctly refer to "the pistons" as "the first and second pistons".

With reference to claim 6, Examiner states that the prior art pistons "can arguably be said to be of substantially the same outer diameter". Applicant disagrees, noting that Felten's pistons have different outer diameters determined by 39b and 39c (Fig. 5); and Adachi's pistons have different outer diameters determined by 12 and 15 (Fig. 1).

10. Claim 8 has been rejected under 35 USC 103(a) as being unpatentable over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484) or Adachi (US 5,273,599) or Felten (US 3,816,218) as applied to claim 1 above, and further in view of Brey (US 3,038,526).

Examiner notes that the primary references do not clearly suggest a center drum structure with alternating fixed and expandable segments *as claimed*, however using the broadest possible interpretation of the claimed "fixed" segments, Brey might be considered to read on claim 8 depending from the original claim 1. Since the amended claim 1 is now believed to be distinguished from the prior art, claims 8-10 should also be allowable as dependent claims. However, it should be noted that, as discussed in the *New Claims* section hereinbelow, claim 8 can be amended to form a novel and non-obvious independent claim in combination with the original claim 1.

11. Claims 9 and 10 have been rejected under 35 USC 103(a) as being unpatentable over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484) or Adachi (US 5,273,599) or Felten (US 3,816,218) as applied to claims 1 and 8 above, and further in view of Becker et al. (US 5,591,288).

Applicant believes that the currently amended independent claim 1 overcomes Examiner's objections. Therefore the claims that depend from claim 1 should also be allowable as further limitations on an allowed claim. Nevertheless, claims 9-10 have been amended as follows.

Claim 9 is amended to remove the phrase "and circumferentially spaced from one another" because it is redundant of the phrase in claim 8 citing "a plurality of elongate fixed segments alternating with a like plurality of elongate expanding segments". The qualifiers "both axial" and "radially" are inserted as shown to more clearly claim what is illustrated in Figures 2D and 2F, for example. In the last clause, the article "the" is replaced by "a" as befits the first mention of the three drum condition terms.

Claim 10 is amended to replace two instances of the word "to" with the word "at", in order to be grammatically consistent throughout the claim.

Claims 11 and 12, previously withdrawn, are not amended.

New Claims

Claim 13 is a newly presented claim, depending from amended dependent claim 4. It is supported by the detailed description on page 34, lines 25-29.

Claim 14 is a newly presented independent claim, formed by substantially combining the original claim 1 (with grammatical corrections discussed hereinabove), plus the original claim 8,

and portions of the original claim 9. In order to define over prior art such as Brey, the text copied from the original claim 8 has been amended to add appropriate limiting adjectives as supported by the detailed description (page 14, line 19 through page 15, line 24) and the drawings (Figures 2A-2E). Thus the text has been amended as follows: "the center section is circumferentially segmented, having a plurality of axially elongate, radially fixed, non-expanding segments circumferentially alternating with a like plurality of axially elongate radially expanding segments". Only the second clause has been copied from the original claim 9, and this has been amended to correct the articles as described above.

Claim 15 is a newly presented claim depending from claim 14, incorporating the first clause of the original claim 9, amended as described above and also removing the entire phrase: "the expanding segments are axially-extending and circumferentially spaced from one another, and" since it is redundant of claim 14.

Claim 16 is a newly presented claim depending from claim 14, incorporating a copy of the claim 10 amended as described hereinabove.

Claim 17 is a newly presented claim depending from claim 14, incorporating a copy of the original claims 2 and 3, both then amended as discussed hereinabove with respect to the amended claim 1.

Claim 18 is a newly presented claim depending from claim 17, incorporating a copy of the original claim 4.

Claim 19 is a newly presented claim depending from claim 18, incorporating a copy of the newly presented claim 13.

Claim 20 is a newly presented claim depending from claim 18, incorporating a copy of the amended claim 5 discussed hereinabove.

Claim 21 is a newly presented claim depending from claim 20, incorporating a copy of the original claim 6.

Conclusion

The undersigned Attorney of Record has made a sincere effort to amend the claims in response to the present Office Action. Favorable re-examination and consideration are respectfully requested.

Respectfully submitted,



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